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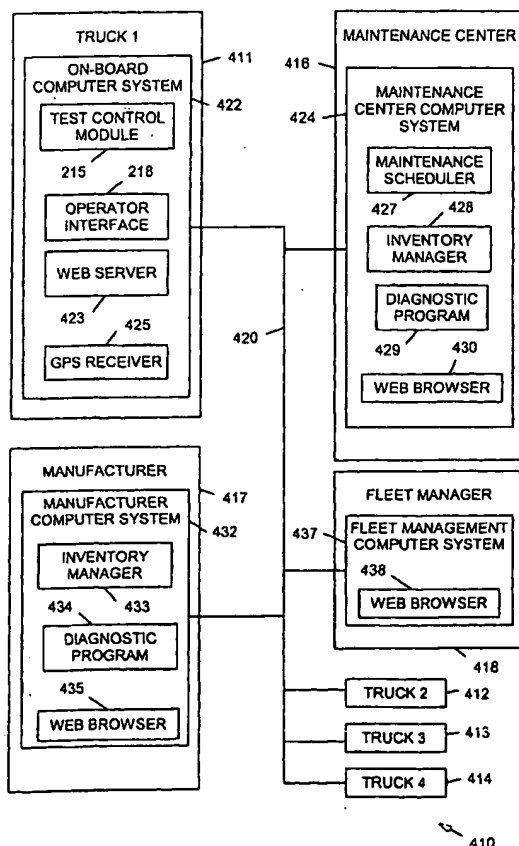
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[Continued on next page]

(54) Title: EQUIPMENT SERVICE VEHICLE WITH NETWORK-ASSISTED VEHICLE SERVICE AND REPAIR



(57) Abstract: A method of ordering parts for an equipment service vehicle comprises performing a diagnostic test on the equipment service vehicle, the performing step being performed by an on-board computer system of the equipment service vehicle and transmitting a request for a replacement part for the equipment service vehicle, the request being transmitted from the on-board computer system to an off-board computer system by way of a wireless radio-frequency (RF) communication link. A method of scheduling maintenance for an equipment service vehicle comprises performing a diagnostic test on the equipment service vehicle using an on-board computer system of the equipment service vehicle, and transmitting a request to schedule the equipment service vehicle for maintenance. The request is transmitted from the on-board vehicle computer system to an off-board computer system by way of a wireless radio-frequency communication link.

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F17/60 G07C5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F G07C G08G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	M. NATHANSON: "Vehicle Intelligence And Remote Wireless OBD" SAE TECHNICAL PAPER 2000-01-3506, 4 - 6 December 2000, pages 1-12, XP002256061 the whole document abstract page 2 page 4 -page 8 page 12 "Conclusion" ----- -/--	1-47

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- *&* document member of the same patent family

Date of the actual completion of the international search

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>M.A. BARRACO KLEMENT: "Agile Support Project - Global Hawk Program"</p> <p>PM PROGRAM MANAGER, January 1999 (1999-01) - February 1999 (1999-02), pages 66-70, XP002256062</p> <p>Internet (http://www.dau.mil/pubs/pm/pmpdf99/klemenjf.pdf) the whole document page 67 page 68, middle column page 69, left-hand column page 70, middle column</p>	1-47
X	<p>J. SKIBINSKI, J. TRAINOR, C. REED: "Internet-based Vehicle Communication Network"</p> <p>SAE TECHNICAL PAPER 2000-01-3503, 4 - 6 December 2000, pages 1-6, XP002256063</p> <p>the whole document page 6</p>	1-47
X	<p>EP 0 949 122 A (MANNESMANN VDO AG) 13 October 1999 (1999-10-13) abstract; figures 1,3 page 3, line 13 -page 4, line 21</p>	1-47
A	<p>GB 2 263 376 A (DAVIES LESLIE KEITH) 21 July 1993 (1993-07-21) abstract page 1 -page 2 page 3, line 22 - line 28 page 5, line 30 -page 6, line 29 page 9, line 7 - line 31</p>	1-47
A	<p>DE 41 11 865 A (MITSUBISHI ELECTRIC CORP) 17 October 1991 (1991-10-17) abstract page 1, line 1 - line 29 page 4 -page 5</p>	1-47
A	<p>US 2001/034656 A1 (ANDERSON, LUCAS) 25 October 2001 (2001-10-25) abstract paragraphs '0006!, '0008!, '0009! paragraphs '0019!, '0020! paragraphs '0026!-'0028! paragraph '0035!</p>	1-47

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 819 201 A (DEGRAAF BRENT L) 6 October 1998 (1998-10-06) abstract; figures 2,3,6A column 1, line 34 - line 58 column 2, line 51 - line 65 column 4 ----	48-54
X	LUKA J ET AL: "Mobile Diagnosis" VEHICLE ELECTRONICS CONFERENCE, 1999. (IVEC '99). PROCEEDINGS OF THE IEEE INTERNATIONAL CHANGCHUN, CHINA 6-9 SEPT. 1999, PISCATAWAY, NJ, USA, IEEE, US, 6 September 1999 (1999-09-06), pages 215-220, XP010375901 ISBN: 0-7803-5296-3 -----	55
Y	the whole document -----	48-54
X	US 6 263 268 B1 (NATHANSON MARTIN DANIEL) 17 July 2001 (2001-07-17) -----	55
Y	abstract the whole document -----	48-54
X	EP 1 087 343 A (RENAULT) 28 March 2001 (2001-03-28) column 2, line 14 -column 3, line 35 column 4, line 48 -column 5, line 45 column 6, line 34 -column 7, line 58 column 8, line 34 - line 44 -----	55

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-47

An vehicle on-board computer performs diagnostics and identifies thereby defective parts and automatically orders the parts identified as defective.

The technical problem dealt with is the automation of the detection of a defective part and the retrieval of sufficient information for ordering a part.

1.1. Claims: 48-54

Transmitting data to a computer on-board of a vehicle, the data being indicative of a recall, and displaying such information. Dependent claims pertain to the arrangement of a maintenance appointment. The Examiner could not find any technical problem dealt with in the light of the knowledge that is common in the field of telemetry.

1.2. Claim : 55

Method of diagnosing a vehicle by the use of telemetry, i.e. by performing tests on-board a vehicle using a remote computer. The Examiner could not find any technical problem dealt with in the light of the knowledge that is common in the field of telemetry.

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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